



Questions?
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Ask Question 

Question
Determine if the following is an arithmetic sequence and find the step: 13, 23, 33, 43, 53...

13, 23, 33, 43, 53...

Answer

$$23 - 13 = 10$$

$$33 - 23 = 10$$

$$43 - 33 = 10$$

$$53 - 43 = 10$$

$$d = 10$$

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Question
Determine if the following is an arithmetic sequence and find the step: 10, 100, 190, 280...

$$100 - 10 = 90$$

$$190 - 100 = 90$$

$$280 - 190 = 90$$

Answer

$$d = 90$$

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Questions?
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Question
Determine if the following is an arithmetic sequence and find the step: $5/2, 9/2, 13/2, 17/2, \dots$

Answer

$$\frac{9}{2} - \frac{5}{2} = \frac{4}{2}$$

$$\frac{13}{2} - \frac{9}{2} = \frac{4}{2}$$

$$\frac{17}{2} - \frac{13}{2} = \frac{4}{2}$$

$$d = \frac{4}{2} = 2$$

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Find the first 4 terms of the arithmetic sequence
 $a_n = \frac{1}{2}(n - 1) + \frac{1}{5}$.

Question

Answer

$$a_n = \frac{1}{2}(n - 1) + \frac{1}{5}$$

$n = 1$

$$a_1 = \frac{1}{2}(1 - 1) + \frac{1}{5}$$

$$a_1 = \frac{1}{2}(0) + \frac{1}{5}$$

$$a_1 = 0 + \frac{1}{5}$$

$$a_1 = \frac{1}{5}$$

$n = 2$

$$a_2 = \frac{1}{2}(2 - 1) + \frac{1}{5}$$

$$a_2 = \frac{1}{2}(1) + \frac{1}{5}$$

$$a_2 = \frac{1}{2} + \frac{1}{5}$$

$$a_2 = \frac{7}{10}$$

Similarly, $a_3 = \frac{6}{5}$ and $a_4 = \frac{17}{10}$

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Questions?
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Question
Determine if the following is an arithmetic sequence and find the common expression: $5/2, 9/2, 13/2, 17/2, \dots$

Answer

$$\frac{9}{2} - \frac{5}{2} = \frac{4}{2}$$

$$\frac{13}{2} - \frac{9}{2} = \frac{4}{2}$$

$$\frac{17}{2} - \frac{13}{2} = \frac{4}{2}$$

$$d = \frac{4}{2} = 2$$

$$a_n = a_1 + (n - 1)d$$

$$a_n = \frac{5}{2} + 2(n - 1)$$

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Question
Determine if the following is an arithmetic sequence and find the common expression: -5, -3, -1, 1, 3, 5...

Answer

$$-3 - (-5) = 2$$

$$-1 - (-3) = 2$$

$$1 - (-1) = 2$$

$$3 - 1 = 2$$

$$5 - 3 = 2$$

$$d = 2$$

$$a_n = a_1 + (n - 1)d$$

$$a_n = -5 + 2(n - 1)$$

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